

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 3

IN THE CLAIMS:

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Original) An immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant.
2. (Original) A composition according to claim 1, wherein the antigen is of autologous, heterologous, or chimeric nature.
3. (Original) A composition according to claim 1, wherein the antigen is a mutant of the molecule.
4. (Original) A composition according to claim 1, wherein the immunogen is obtained from synthetic, recombinant, or natural sources.
5. (Currently Amended) A composition according to ~~claims from 1 to 4~~ claim 1 wherein the immunogen is administered as part of plasmidic or viral vectors.
6. (Currently Amended) A composition according to ~~claim from 1 to 5~~ claim 1, wherein the adjuvant is selected from the group consistent of: the recombinant particle of Hepatitis B Core Antigen, the recombinant particle of Hepatitis C Core Antigen, the OPC protein, the KLH protein, Freund adjuvant or its derivatives, and Montanide ISA 51.
7. (Original) An immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations.

Applicant: Romero, et al.

Application Serial No.: Unassigned

Filing Date: Herewith

Docket No.: 976-19 PCT/US

Page 4

8. (Original) An immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein.
9. (Original) An immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant.
10. (Original) A composition according to claim 9, wherein the antigen is of autologous, heterologous, or chimeric nature.
11. (Original) A composition according to claim 9, wherein the antigen is a mutant of the molecule.
12. (Original) A composition according to claim 9, wherein the immunogen is obtained from synthetic, recombinant, or natural sources.
13. (Currently Amended) A composition according to claim 9 wherein the immunogen is administered as part of plasmidic or viral vectors.
14. (Currently Amended) A composition according to ~~claims from 9 to 13~~ claim 9, wherein the adjuvant is selected from the group consistent of: the recombinant particle of Hepatitis B Core Antigen, the recombinant particle of Hepatitis C Core Antigen, the OPC protein, the KLH protein, Freund adjuvant or its derivatives, and Montanide ISA 51.
15. (Original) An immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations.
16. (Original) An immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein.

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 5

17. (Original) An immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant.
18. (Currently Amended) A composition according to claim 19 17, wherein the antigen is of autologous, heterologous, or chimeric nature.
19. (Currently Amended) A composition according to claim 19 17, wherein the antigens is a mutant of the molecule.
20. (Currently Amended) A composition according to claim 19 17, wherein the immunogen is obtained from synthetic, recombinant, or natural sources.
21. (Currently Amended) A composition according to claim 17 wherein the immunogen is administered as part of plasmidic or viral vectors.
22. (Currently Amended) A composition according to ~~claims from 17 to 21~~ claim 17, wherein the adjuvant is selected from the group consistent of: the recombinant particle of Hepatitis B Core Antigen, the recombinant particle of Hepatitis C Core Antigen, the OPC protein, the KLH protein, Freund adjuvant or its derivatives, and Montanide ISA 51.
23. (Original) An immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations.
24. (Original) An immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered associated covalently or not to the p64K protein.
25. (Original) An immunogenic composition comprising VEGF polypeptides and/or its encoding oligonucleotides, administered in the presence of an adjuvant.
26. (Currently Amended) An immunogenic composition comprising at least two of the preparations described in: ~~claims from 1 to 24~~ (i) an immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding

oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant; (ii) an immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations; (iii) an immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein; (iv) an immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant; (v) an immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations; (vi) an immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein; (vii) an immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant; (viii) an immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations; and (ix) an immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered associated covalently or not to the p64K protein.

27. (Currently Amended) An immunogenic composition comprising VEGF and at least a molecule described in: claims 1-3, 7-9 and 16-18,

- i) an immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant;

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 7

- ii) an immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations;
- iii) an immunogenic composition comprising VEGFR1 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein;
- iv) an immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant;
- v) an immunogenic composition comprising VEGFR2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein; and
- vi) an immunogenic composition comprising VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or their encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant;

administered in the presence or not of a pharmaceutically accepted adjuvant.

28. (Original) An immunogenic composition comprising a bi-cistronic vector coding for a VEGFR1 or fragments thereof and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.

29. (Original) An immunogenic composition comprising a DNA vector coding for a VEGFR1 or fragments thereof and a DNA vector coding for a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 8

30. (Original) An immunogenic composition comprising a fusion protein containing a VEGFR1 or fragments thereof and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.
31. (Currently Amended) An immunogenic composition comprising VEGFR1 polypeptide polypeptide or fragments thereof and, a mutant of VEGF polypeptide polypeptide administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.
32. (Original) An immunogenic composition comprising a bi-cistronic vector coding for a VEGFR2 or fragments thereof and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.
33. (Original) An immunogenic composition comprising a DNA vector coding for a VEGFR2 or fragments thereof and a DNA vector coding for a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.
34. (Original) An immunogenic composition comprising a fusion protein containing a VEGFR2 or fragments thereof and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.
35. (Currently Amended) An immunogenic composition comprising VEGFR2 polypeptide polypeptide or fragments thereof and a mutant of VEGF polypeptide polypeptide administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP.
36. (Currently Amended) Method for active vaccination ~~characterized by the administration of~~ comprising administering an immunogenic composition comprising immunogenic VEGFR1 polypeptides and fragments thereof or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant for the treatment of disorders associated to an increment of angiogenesis.

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 9

37. (Original) Method of claim 36 wherein the immunogen is of autologous, heterologous, or chimeric nature.
38. (Original) Method of claim 36 wherein the immunogen is a mutant of the molecule.
39. (Original) Method of claim 36 wherein the immunogen is obtained from synthetic, recombinant, or natural sources
40. (Original) Method of claim 36 wherein the immunogen is administered as part of plasmidic or viral vectors.
41. (Currently Amended) Method of ~~claims~~ claim 36 wherein the adjuvant is selected from the group ~~eon~~sistent consisting of: the recombinant particle of Hepatitis B Core Antigen, the recombinant particle of Hepatitis C Core Antigen, the OPC protein, the KLH protein, Freund adjuvant or its derivatives, and Montanide ISA 51.
42. (Currently Amended) Method of ~~claims~~ claim 36 wherein the immunogenic composition comprise VEGFR1 polypeptides and fragments thereof or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.
43. (Currently Amended) Method of ~~claims from 36 to 40~~ claim 36 wherein the immunogenic composition comprise VEGFR1 polypeptides and fragments thereof or its encoding oligonucleotides, administered associated covalently or not to the p64K protein.
44. (Currently Amended) Method for active vaccination ~~eharacterized by the administration of comprising administering~~ an immunogenic composition comprising VEGFR2 polypeptides and fragments thereof or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant for the treatment of disorders associated to an increment of angiogenesis.
45. (Original) Method of claim 44 wherein the immunogen is of autologous, heterologous, or chimeric nature.

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 10

46. (Original) Method of claim 44 wherein the immunogen is a mutant of the molecule.
47. (Original) Method of claim 44 wherein the immunogen is obtained from synthetic, recombinant, or natural sources
48. (Original) Method of claim 44 wherein the immunogen is administered as part of plasmidic or viral vectors.
49. (Currently Amended) Method of ~~claims from 44 to 48~~ claim 44 wherein the adjuvant is selected from the group ~~consistent~~ consisting of: the recombinant particle of Hepatitis B Core Antigen, the recombinant particle of Hepatitis C Core Antigen, the OPC protein, the KLH protein, Freund adjuvant or its derivatives, and Montanide ISA 51.
50. (Currently Amended) Method of ~~claims from 44 to 48~~ claim 44 wherein the immunogenic composition comprise VEGFR2 polypeptides and fragments thereof or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.
51. (Currently Amended) Method of ~~claims from 44 to 48~~ claim 44 wherein the immunogenic composition comprise polypeptides or oligonucleotides coding for the VEGFR2 and fragments thereof, administered associated covalently or not to the p64K protein
52. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising the VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant for the treatment of disorders associated to an increment of angiogenesis.
53. (Original) Method of claim 52 wherein the immunogen is of autologous, heterologous, or chimeric nature.

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 11

54. (Original) Method of claim 52 wherein the immunogen is a mutant of the molecule.
55. (Original) Method of claim 52 wherein the immunogen is obtained from synthetic, recombinant, or natural sources
56. (Original) Method of claim 52 wherein the immunogen is administered as part of plasmidic or viral vectors.
57. (Currently Amended) Method of ~~claims from 52 to 56~~ claim 52 wherein the adjuvant is selected from the group consistent of: the recombinant particle of Hepatitis B Core Antigen, the recombinant particle of Hepatitis C Core Antigen, the OPC protein, the KLH protein, Freund adjuvant or its derivatives, and Montanide ISA 51.
58. (Currently Amended) Method of ~~claims from 52 to 56~~ claim 52 wherein the immunogenic composition comprise VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to *Neisseria meningitidis* outer membrane derived VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.
59. (Currently Amended) Method of ~~claims from 52 to 56~~ claim 52 wherein the immunogenic composition comprise VEGFR3, NRP-1 or NRP-2 polypeptides and fragments thereof, or its encoding oligonucleotides, administered associated covalently or not to the p64K protein.
60. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising~~ administering an immunogenic composition comprising VEGF polypeptides and fragments thereof, or its encoding oligonucleotides, administered in the presence or not of a pharmaceutically accepted adjuvant for the restoration or improvement of immune functions, in immunologically compromised hosts, subjected or not to other disease-oriented vaccination procedures.
61. (Currently Amended) Method for active vaccination ~~characterized by the administration of an immunogenic composition comprising at least two of the~~

Applicant: Romero, et al.
Application Serial No.: Unassigned
Filing Date: Herewith
Docket No.: 976-19 PCT/US
Page 12

~~preparations described in claims from 1 to 24 comprising administering an immunogenic composition according to claim 26 for the treatment of disorders associated to an increment of angiogenesis~~

62. (Currently Amended) Method for active vaccination ~~characterized by the administration of an immunogenic composition comprising VEGF and at least a molecule described in claims 1-3, 7-9 and 16-18, administered in the presence or not of a pharmaceutically accepted adjuvant comprising administering an immunogenic composition according to claim 27~~ for the treatment of disorders associated to an increment of angiogenesis.
63. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising a bi-cistronic vector coding for VEGFR2 or fragments thereof, and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.
64. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising a DNA vector coding for VEGFR2 or fragments thereof and a DNA vector coding for a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP preparations for the treatment of disorders associated to an increment of angiogenesis.
65. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising a fusion protein containing VEGFR2 or fragments thereof and a mutant of VEGF administered in the presence of or incorporated into the *Neisseria meningitidis* outer membrane derived VSSP preparation, for the treatment of disorders associated to an increment of angiogenesis.

66. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic protein composition comprising VEGFR2 or fragments thereof, and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.
67. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising a bi-cistronic vector coding for VEGFR1 or fragments thereof, and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.
68. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising a DNA vector coding for VEGFR1 or fragments thereof and a DNA vector coding for a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived VSSP preparations for the treatment of disorders associated to an increment of angiogenesis.
69. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic composition comprising a fusion protein containing VEGFR1 or fragments thereof and a mutant of VEGF administered in the presence of or incorporated into the *Neisseria meningitidis* outer membrane derived VSSP preparation, for the treatment of disorders associated to an increment of angiogenesis.
70. (Currently Amended) Method for active vaccination ~~characterized by the administration of comprising administering~~ an immunogenic protein composition comprising VEGFR1 or fragments thereof, and a mutant of VEGF, administered in the presence of or incorporated into *Neisseria meningitidis* outer membrane derived

VSSP preparations, for the treatment of disorders associated to an increment of angiogenesis.

71.-79. (Cancelled)

80. (New) Method according to claim 36, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
81. (New) Method according to claim 44, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
82. (New) Method according to claim 52, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
83. (New) Method according to claim 61, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
84. (New) Method according to claim 62, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
85. (New) Method according to claim 63, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
86. (New) Method according to claim 64, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
87. (New) Method according to claim 65, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.

Applicant: Romero, et al.

Application Serial No.: Unassigned

Filing Date: Herewith

Docket No.: 976-19 PCT/US

Page 15

88. (New) Method according to claim 66, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; or for the treatment of diseases or entities characterized by an increment in the angiogenesis.
89. (New) Method according to claim 67, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; for the treatment of diseases or entities characterized by an increment in the angiogenesis; or for the restoration or improvement of immune function, in immunologically compromised hosts, subjected or not to other disease-oriented vaccination procedures.
90. (New) Method according to claim 68, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; for the treatment of diseases or entities characterized by an increment in the angiogenesis; or for the restoration or improvement of immune function, in immunologically compromised hosts, subjected or not to other disease-oriented vaccination procedures.
91. (New) Method according to claim 69, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; for the treatment of diseases or entities characterized by an increment in the angiogenesis; or for the restoration or improvement of immune function, in immunologically compromised hosts, subjected or not to other disease-oriented vaccination procedures.
92. (New) Method according to claim 70, for the treatment of tumors in mammals; for the treatment and prevention of tumors in humans; for the treatment of diseases or entities characterized by an increment in the angiogenesis; or for the restoration or improvement of immune function, in immunologically compromised hosts, subjected or not to other disease-oriented vaccination procedures.
93. (New) Method according to claim 60, for the restoration or improvement of immune function, in immunologically hosts, subjected or not to other disease-oriented vaccination procedures.

Applicant: Romero, et al.

Application Serial No.: Unassigned

Filing Date: Herewith

Docket No.: 976-19 PCT/US

Page 16

94. (New) Method according to claim 67, for the restoration or improvement of immune function, in immunologically hosts, subjected or not to other disease-oriented vaccination procedures.
95. (New) Method according to claim 68, for the restoration or improvement of immune function, in immunologically hosts, subjected or not to other disease-oriented vaccination procedures.
96. (New) Method according to claim 69, for the restoration or improvement of immune function, in immunologically hosts, subjected or not to other disease-oriented vaccination procedures.
97. (New) Method according to claim 70, for the restoration or improvement of immune function, in immunologically hosts, subjected or not to other disease-oriented vaccination procedures.